



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARK
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
09/811 429	03/20/2001	Marcheze	08144,0006

EXAMINER

M J Andrews

ART UNIT	PAPER NUMBER
----------	--------------

1742 18

DATE MAILED:

INTERVIEW SUMMARY

All participants (applicant, applicant's representative, PTO personnel):

(1) Clair X Mullen Jr (3) _____

(2) Melvyn Andrews (4) _____

Date of Interview 4-25-03

Type: ☒ Telephonic ☐ Televideo Conference ☐ Personal (copy is given to ☐ applicant ☐ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☒ No If yes, brief description: _____

Agreement ☐ was reached. ☒ was not reached.

Claim(s) discussed: 1-3

Identification of prior art discussed: Schmitt (6,071,325), Harker et al (3,922,165)
Baker (4,113,479)

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: Examiner
notified attorney that Claim 1 was not allowable due to new art
Harker et al/Baker which disclose carbonaceous reducing agents.
Examiner erred in suggesting that Claim 2 is allowable because
Schmitt discloses flux; likewise Claim 3 because Schmitt
discloses iron ore.

Claims 4, 5, 7, 8, 9 & 10 are allowed

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

☐ It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

Examiner Note: You must sign this form unless it is an attachment to another form.

Melvyn Andrews
MELVYN ANDREWS
EXAMINER

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 to 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt (US 6,071,325) in view of Harker et al (US 3,922,165) or Buker (US 4,113,479). Schmitt teaches a pre-gel such as gelatinized starch (See applicant's remarks at page 2 of the Response of January 2, 2002 Paper No.6) but fails to teach a carbonaceous reducing agent as part of the agglomerates but Harker et al and Buker each teach agglomerates (i.e. briquettes) which can be made using carbonaceous reducing agents. See Harker et al at col.3, lines 17-37. See the abstract of Buker at col.2, lines 5-15. Of course Schmitt's agglomerated product can be a briquette (col.3, lines 17-21). Because carbonaceous reducing agents are so well known for their reducing ability in agglomeration processes, it would have been obvious to use the carbonaceous reducing agent of Harker et al or Buker, in the composition of Schmitt to enhance the reduction of the metallic oxides of Schmitt. While none of the references teaches the claimed limitation "self-reducing", the carbonaceous reducing agent of Harker et al and Buker would inherently confer this property to the agglomerates of Schmitt since such carbonaceous are self reducing (See applicant's remarks at page 2 of the Response of January 2, 2002 Paper No.6) . Based on the foregoing the claimed invention would have been obvious in view of the combined teachings of Schmitt in view of Harker et al or Buker. With respect to Claim 2 Schmitt discloses iron ore (col. 3,

lines 23 to 40) and with respect to Claim 3 Schmitt discloses minerals such as dolomite (col.3, lines 41 to 53) as "particulate materials" to be agglomerated.

Claims 1 to 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt (US 6,071,325) in view of McGaa (US 6,342,089) and Kitamori et al (US 4,372,968) as previously set forth in Paper No.14. Schmitt discloses a binder composition comprising pregelatinized starch (col.12, line 5) as a binder for agglomerating ore (col.3, lines 17 to 40) as well as minerals ,such as coal and coke (col.3, lines 41 to 53) but does not disclose the combination of metallic oxide containing particles and particles of a carbonaceous reducing agent or the method by which pregelatinized starch is made but McGaa discloses pellets containing iron oxide-containing material (col.5, lines 57 to 64), an internal reductant such as coal or coke (col.5, lines 1 to 13) and a binder which may be an organic binder such as starch (col.6, line 36), it would have been obvious to one of ordinary skill in the art at the time the invention was made to include internal reductants in the Schmitt pellet as taught by McGaa in order to produce direct reduced iron while increasing production by increasing pellet activity, decreasing residence time and minimizing the generation of fines and Kitamori et al discloses a binder of "pregelatinized starch" may be made by dispersing starch in water and heating and drying (col.2,lines 40 to 56) it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a pregelatinized starch made by the method disclosed by Kitamori et al as a binder in the Schmitt pellet since the Kitamori et al "pregelatinized starch" is a useful water soluble

binder. With respect to Claim 2 Schmitt disclose that other substances may be added such as fluxes (col.6, lines 43 to 50).

Upon reconsideration it is the Examiner's position that Schmitt teaches a pre-gel, such as gelatinized starch , see applicant's remarks at page 2 of the Response of January 2, 2002 (Paper No.6).

Allowable Subject Matter

Claims 4, 5 and 7 to 10 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The patents to Schmitt (US 6,071,325), McGaa (US 6,342,089), Whigham (US 3,957,482) , Kitamori et al (US 4,372,968) Harker et al (US 3,922,165) or Buker (US 4,113,479) do not disclose or suggest a method or means for sequentially decreasing temperature of hot gas introduced to the agglomerates as moisture content of the agglomerates decreases.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is 703-308-3739. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Application/Control Number: 09/811,429

Page 5

Art Unit: 1742

mja

August 13, 2003

A handwritten signature in cursive script that reads "Melvyn Andrews".

MELVYN ANDREWS
PRIMARY EXAMINER